Preventing School Failure:  

The Relationship Between Preschool and Primary Education
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Preventing School Failure: The Relationship Between Preschool and Primary Education

Proceedings of a workshop on preschool research held in Bogota, Colombia, 26–29 May 1981
Résumé

Cette publication contient les exposés présentés au cours d'un séminaire sur la relation entre l'éducation préscolaire et primaire qui a été tenu à Bogota, Colombie, en mai 1981, sous les auspices du CRDI et de la Fondation Ford. Le séminaire a réuni des chercheurs en éducation préscolaire venus de diverses régions du monde et spécialisés dans différentes disciplines. L'éveil précoce des enfants fut examiné à la lumière des études de cas et des programmes nationaux présentés, et analysé en fonction des effets à court et à long terme qu'il peut avoir sur le développement de l'enfant et son succès lors de son entrée dans le système scolaire. Les travaux sont groupés sous trois grands thèmes : recherche et action en éducation préscolaire et primaire; considérations sur le problème de l'éducation préscolaire et primaire; et discussions et recommandations générales.

Resumen

Esta publicación contiene las ponencias presentadas en un seminario sobre la relación entre educación preescolar y primaria, celebrado en Bogotá, Colombia, en mayo de 1981 bajo los auspicios del CIID y la Fundación Ford. El seminario reunió a investigadores de la educación preescolar procedentes de diversas regiones del mundo y con diferentes formaciones disciplinarias. La estimulación infantil temprana fue vista a la luz de los estudios de caso y los programas nacionales presentados, y analizada en función de los efectos que a corto o largo plazo puede tener sobre el desarrollo del niño y su éxito al ingresar al sistema educativo formal. Tres amplias secciones agrupan los trabajos de acuerdo con los temas tratados: investigación y acción en educación preescolar y primaria; consideraciones sobre la problemática preescolar y primaria; y discusiones y recomendaciones generales.
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Compensatory Measures in Poor Areas: Some Possibilities for Preschool Education

Carmen Luz Latorre

Introduction

Despite high growth rates over the last 2 decades, estimates indicate that 27% of the population in Latin America lives in severe poverty (ILPES 1978). While some authors view poverty as the logical result of the transition from a traditional to a modern economy (Mercado et al. 1968), others see it as stemming from the ways in which capital is accumulated in these economies (Cardoso 1971; Nun 1969). This study subscribes to the latter view but takes the position that until structural reforms are made to correct the underlying causes of poverty, action can and must be taken to improve the lot of disadvantaged groups. This study will concentrate on the work that can be done in the field of marginal preschool education and in the primary education system in terms of readapting this system so that it benefits the very poorest sectors and, consequently, society as a whole.

Typically, the poor have been characterized as resigned, conformist, and unconcerned about the future and with a strong tendency toward only satisfying the most immediate needs (Martinic 1979). It would be difficult to implement policies designed to bring about major changes in the lives of people having these characteristics. However, this profile of the poor is not accurate. A study done in a marginal area of Santiago (Cortazar et al. 1976) shows that most residents are highly dissatisfied with their lives, have a clear idea of the fundamental causes of their situation, and do tend to make plans for the future. Some 30% did, however, reflect the characteristics often associated with poverty.

There has been much discussion and debate about the different ways of measuring poverty and the level below which poverty would be said to be “critical” (Altimir 1978; Franco 1977), but there is widespread agreement that the magnitude of this problem is enormous.

Studies conducted in poor sectors of Chile (Cortazar 1977) show that 9% of the families do not satisfy any of the basic needs (nutrition, health, education, and housing). However, there is no universal state of poverty and the degree to which basic needs go unsatisfied varies, depending on the need that is being analyzed. Using a summary index that gives equal weight to indicators like nutrition, health, education, and housing, it was found that in 45% of the homes, basic needs were not met. Poverty deeply affects young children because they are the ones who are most vulnerable when their basic needs are not met.

The poverty in which large numbers of people in the region live make it impossible to provide children with the basic elements for their development: health, nutrition, and psychosocial stimulation. The results are high rates of child morbidity and mortality, poor intellectual development, and malnutrition (Mauras et al. 1979). Children affected by these problems perform poorly in school and this, in turn, limits future job opportunities. In terms of development in Latin American countries, this overall situation represents a tremendous loss of human potential (Selowsky 1979). Many studies have stressed the importance of early intelligence quotient (IQ) levels later in a person's life. In his study on the most important follow-up studies done in the United States over a 60-year period, Bloom (1964) concludes that in terms of intelligence measured at the age of 17, at least 20% of intelligence is developed by age 1, 50% by age 4, and 80% by age 8.

1Programa Interdisciplinario de Investigaciones Educativas (PIIE), Brown Sur 247, Santiago, Chile.
2These characteristics should be taken into account when designing compensatory measures.

3Estimates are based on the Family Budget Survey 1968–69 of the Statistics and Census Bureau.
Thus, it is important to do research on preschools as possible mechanisms for preventing intellectual impairment and nutritional damage and for furthering the development of certain skills and abilities.

A look at the development of preschool systems in this century reveals that for the most part they have been a response to the economic necessities of development. Industrialization led to the creation of nurseries. The increasing number of women who joined the work force, together with the decline of the extended family brought about by rural-urban migration, made it necessary for there to be places where children could be cared for — that is, where they could be physically watched over. Later, with the boom in education, nursery schools and preprimary programs appeared. These schools are designed to develop children's intellectual capacity so that they will do well when they enter primary school.

Preprimary schools have undergone great expansion above all in the last decades; enrollment went from 0.9 million in 1960 to 1.6 million in 1970 and reached 2.3 million in 1975. In spite of this expansion, no more than 10% of the population between the ages of 0–6 is covered by a preschool program (UNESCO 1977). Studies done in the 1970s reveal that both preprimary and nursery care are basically urban in nature and cater to the relatively well-off.

As part of the general shift in concern during the early 70s toward disadvantaged groups, directors of public preprimary programs began a reassessment aimed at increasing the enrollment of poor children in these programs. Special programs were begun to offset the consequences of physical and mental privations in 0–2 year-old children (early stimulation programs). A large number of integral care pilot programs were also set up because they were less expensive than formal programs and, therefore, could potentially be used on a mass scale. Direct community participation was an integral part of all these different programs; members of the community worked actively on programs and also benefited from them. Consequently, programs were more in touch with the real situation in communities. Pilot program coverage is, however, still limited; these programs perpetuate themselves where they started, with no attempt to replicate and/or adapt them to other areas.

Although some evaluations of nonformal programs have been made, they concentrate on the effort put into them and present only some measurement of their effectiveness. Generally speaking, however, they are based more on opinion than on measured impact. Those few measurement that are made deal with cognitive aspects of child development. Little work has been done to document the effects of programs on families and the community.

The seminar on preschool education in marginal sectors, sponsored by the Bernard Van Leer Foundation in 1979, came to the conclusion that effective, lasting results can only be obtained from this type of education with the direct participation of the family and the community (Bernard Van Leer Foundation 1979). Therefore, the need to study the effects of programs on these groups and to explore the extent to which they are involved and continue to work on the programs is even more urgent. Program reports rarely give information on cost; costs are only mentioned in terms of what a specific item cost at a given time. Because inflation runs high in most countries in the region, this "historical" approach to cost does not reflect the real economics of program implementation. Furthermore, records of operating costs usually include direct program costs (staff salaries, equipment, and materials), but do not take into account resources and nonmonetary types of contributions made by families and the community. It is clear that these resources must be included because they could have been used for different purposes and do represent an outlay to society.

Therefore, every country must decide which preschool system, or combination of systems, would best meet its needs and be implemented on a large scale for preschool children from marginal communities.

Formal preschool programs cannot be implemented on a mass scale over the short and medium terms in marginal zones for several reasons: they are expensive, there is a dearth of qualified people to work on them, and because they are not a natural creation of the community itself, their effectiveness is limited. Therefore, nonformal preschool programs already operating in the region must be considered as possibilities that deserve careful study. Basic information on these programs must be gathered and should include their effects and cost.

With this information, based on a coherent and coordinated methodology, it will be possible to compare programs and explore the likelihood of replicating them in other contexts. Latin American countries must work together to find solutions to common problems such as preschool education for marginal children. Owing to ethnic, geographic, and other factors, poverty takes many different forms within a country; so a single preschool system will not do for the whole country.
The restricted resources available for extensive investment and, specifically, education, health, and housing in Latin America make it necessary to establish very definite criteria for setting priorities within the subpopulations where services are to be provided. This assumes an in-depth knowledge of these communities to select the most suitable systems for them.

**Progress Made in the Knowledge of Preschool Education in Chile**

In view of the situation described, the decision was made to do an integral evaluation of preschool programs in marginal communities to determine the best combinations of systems. In 1979, with the United Nations Children's Fund (UNICEF) assistance, three nonformal preschool systems were evaluated in Chile: the Preschool Plaza, the Parent-Children Program (PCP), and the Early Stimulation Program (Latorre and Magendzo, in press).

Aside from the basic information on preschool programs, another important outcome of this work was the model for evaluation that was developed.

The model incorporates several different types of action: levels of contact (how evaluating team members established contact with programs), and evaluation categories used at each level of contact. The levels of contact are: approach, interaction, and involvement; the categories are: effort, effectiveness, and conditioning factors (Magendzo and Latorre 1979).

A summary of evaluation findings regarding effort and cost for each program is presented here (a) to underscore the importance of being thoroughly familiar with the advantages and limitations of each program and (b) to provide the basis for understanding the combination of systems proposed later for use in marginal sectors of Chile.

Each program is analyzed in terms of the effort and social costs of implementation (Latorre and Magendzo, in press).

**Preschool Plaza**

*Effort:* This program is a model of nontraditional preschool education developed in a low-income area (La Victoria). The program involves

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This presents the findings of several PIIE studies done on this topic that provide the base for the financial estimates referred to under "Specific Measures." later on in this text.
neighbourhood is at stake, monitors tend to have a deeper commitment to the program.

**Cost:** Annual program social costs reach US$4,449.14. This breaks down to US$320.29 (per child attending) and US$272.25 (for each child enrolled). As a point of reference it is interesting to note that the cost of preprimary courses given by the Ministry of Education is US$127.11 (this does not include food) and those given by the National Board of Preschools cost US$337.84 for a program with 96 children and US$361.33 for a program with 216 children (Filp and Latorre 1978). Although these different figures cannot be directly compared, it would appear that the alternative programs are not, at least from the social standpoint, much less expensive than the others. However, it is important to point out that the Preschool Foundation covers 83% of costs; the rest is covered by the community and other organizations. The National Board of Preschools covers 100% of costs but has been unable to involve the community.

**Parent—Children Program**

**Effort:** This is a nonformal program carried out in marginal communities. It uses a participatory methodology in favour of the adults, children (especially children from 4 to 6), and community.

The Centro de Investigación y Desarrollo de la Educación (CIDE, Educational Research and Development Center) is running the program. A central team is responsible for overall supervision, planning, and operations. The program itself is implemented by general coordinators, who are people from the community with some previous experience with the program.

The PCP is based on discussions of specific topics in groups of 20 people from the community led by Base Coordinators who have been chosen by the members of the community from within their ranks. Slides, pamphlets, pictures and other materials illustrating problems in the community are used to stimulate an exchange of experiences to find solutions to specific problems. Base coordinators receive constant training in how to use the program by participating in special day-long training sessions and other activities conducted by the general coordinators.

From its inception, the program has had two dimensions: research and action. On the one hand, the program does research on different types of nonformal education for adults and children. On the other hand, the program is one of educational action, and in this regard may be termed a type of applied research. In this sense, the program is not imposed on a community, but rather is based on a prior analysis of the sociocultural features of the community where the program will operate.

As new situations arise, the program undergoes continual reexamination and revision while maintaining its original methodology. The primary aim of the program is to help people develop for their own benefit and that of their families.

The idea behind the PCP is community self-education. The methodology, techniques, and materials used are adapted to this end. The program is designed to enrich the child’s personal (family) and extended (community) environment by making parents aware of their educational role in the child’s life, of the problems that affect them, and of possible solutions to these problems.

The program tries to make participants see themselves as being able to act and as responsible for their own lives and problems. On the basis of their experience, program participants seek to find effective ways to solve their problems so that they themselves, their children, and the community benefit.

Program curriculum is directed toward encouraging parents to help their children in school. The curriculum is based on Piaget’s ideas of child development, and, therefore, tries to design learning activities that are consistent with the child’s level of development.

“This method supposes that a prior diagnosis has been done of the different levels of development of the child in order to determine the behavior and activities the child can successfully handle” (CIDE 1971). However, the authors of this program report also state that such a diagnosis is not absolutely essential because parents can supply much of the necessary information. The program approach is based on the family and not on deficiencies because it is not designed to make up for the deficiencies of low-income children, but rather to provide cultural-differential support for children so that they can get along in a pluralistic society.

**Cost:** The operating social costs for a year of PCP operations are US$36,944.30. These annual costs can be broken down as follows: cost per participant (total of 216), US$171.04; cost per participant with children from 4 to 6 years old (total of 74), US$499.25; cost per child (4–6 years old) whose parents also participate (total of 87), US$424.65; and cost per child with one parent participating (total of 561), US$65.85.
The social costs cover operations for 1979 in an urban area. However, if the Parent–Children Program were to operate at optimal capacity, that is, with 25 participants per centre and five centres under the supervision of each general coordinator, costs could be significantly cut to US$37 677.65, which means: cost per participant (750), US$50.24; cost per participant with children from 4 to 6 years old (255), US$147.76; cost per child (4-6 years old) whose parents participate (302), US$124.76; and cost per child whose parents participate (1948), US$19.34.

In terms of social costs, the PCP would appear to be an expensive preschool system alternative for children from 4 to 6 years old (US$424.65) when compared to other systems. However, in terms of the overall support and assistance given to children, the program is less expensive (US$65.85). It should be pointed out that almost 20% of the cost of the program is paid for by the community and the Church.

If the PCP were able to improve community motivation and selection, optimal coordinator/centre and centre/participant levels could be reached, thereby reducing costs for 4–6-year-old children to US$124.32, which is approximately the cost of the Ministry of Education program. These programs are not directly comparable because the PCP has very important effects at the personal and community level that should be given a corresponding weight before any type of realistic comparison may be done. Such an analysis would have to be in terms of cost-effectiveness and not just in terms of program costs.

**Early Stimulation Program**

*Effort:* The Early Stimulation Program is directed at children from 0 to 2 years old from low-income families. The program involves the periodic evaluation and stimulation of the psychomotor development of these children and treatment for those children whose development is deficient. The program has been an official part of the National Health Service's (NHS) child health care program since 1979.

A fundamental part of the program is the periodic evaluation of the child's psychomotor development performed by NHS nurses. The program sees mothers as fundamental agents of child stimulation and education. The NHS nurses and auxiliary staff train mothers in these skills by giving them verbal instructions taken from Stimulation Manuals that are especially designed to stimulate the development of children between the ages of 0 and 24 months.

The target population of the Early Stimulation Program includes: (a) Children between the ages of 0 and 2 years who go to NHS clinics; these clinics screen all these children and identify and treat high-risk cases and children showing signs of backwardness. (b) Mothers of children between the ages of 0 and 2 so that they will have the physical and mental development of their children checked regularly and provide psychological and educational stimulation for their children (especially mothers of children behind in their psychomotor development). (c) NHS staff, professional staff, nurses, and auxiliary staff who are specially trained to work on specific aspects of the program.

The program uses the following materials: (a) The PDES battery of tests (Psychomotor Development Evaluation Scale). (b) Diagnostic Record Card where the results of the PDES are noted. (c) Stimulation Manuals; these books give instructions for every month of a child's life from 0–24 months; they give overall suggestions about child rearing and outline activities a mother can perform during a specific month to stimulate her child's development.

Program action has been devised to take place in two stages: (a) Training NHS staff to diagnose and stimulate psychomotor development and to diagnose child development in the different NHS clinics (to become familiar with the scope of the problem). Training has been conducted throughout the country by means of courses given to staff since January 1978. This has been done to instruct nurses in the most important aspects of early stimulation and to train them to diagnose and stimulate psychomotor development. Nurses are also given on-site training on how to give the PDES tests and how to provide stimulation. Specialized supervisors oversee this work. The diagnostic test will make it possible to estimate the number of children in the country with problems.

(b) The diagnostic and stimulation stages at the national level are scheduled to begin in 1981.

*Cost:* The social costs for the training stage are US$213 982.50; costs for 1 year of program operations amount to US$3 197 451.30. To get some frame of reference for these costs, it is interesting to note that the 1979 budget for the Ministry of Health was US$510 356 000.

The cost of examining normal children from 0–2 years of age is US$15.23 per child; if children in this age group show some sign of risk the cost is US$22.69, and, if they present some form of backwardness, the cost is US$33.51. These costs cannot be analyzed individually, but rather must
be viewed in terms of the effects noted on children once the program has begun and is operating at the national level.

The Ministry of Health is providing the basic financing for the program, and is seeking assistance for specific parts of the program (for example, for training courses) from institutions such as UNICEF, PRUMIN, and so on.

At the request of the Ford Foundation, I drew up a detailed methodology for evaluating nonformal preschool programs based on experience (Latorre 1980a). This methodology will be analyzed and discussed by preschool program researchers and directors from the region to polish it and establish a suitable guide for evaluating programs. All nonformal preschool programs should be analyzed by the same method so that they can be compared with other programs.

Research was done on the nursery schools run by the National Board of Preschools of Chile (Magenzdo et al. 1980). The study analyzed the psychomotor and nutritional development of children attending the nursery schools and compared them to children who remained at home.

Results showed that children who remained at home had more advanced psychomotor development than those who attended nursery school, although this last group made greater progress during the time between the two evaluations. It was clear that nursery schools were more beneficial to children suffering from some psychomotor lag or risk.

The particular study of the development of children who remained at home showed that it was possible to differentiate familiar environment within the context of poverty. The elements included in the description of the family environment referred primarily to general characteristics: mother’s interest to raise and care for children, mother’s emotional stability, emotional ties between mother and child, degree of family harmony, quality of human relations, mother’s level of maturity in assuming her role, and family’s concern with doing everything possible to further child’s welfare and development.

Of the 34 families that were interviewed, 15 had a good family environment (44.11%), eight had fair environments (23.52%), and seven had deficient environments (20.58%); four families were found to have poor environments (11.76%).

It was found that the quality of the family environment is definitely linked to a child’s psychomotor development. Of the children from good family environments, 73.3% showed normal psychomotor development on the first test and 100% showed normal development 3 months later. In fair family environments these percentages were 62.5% and 85.7% at the end of 3 months. However, in deficient and poor environments, only 57% and 50% showed normal psychomotor development during the first evaluation; these percentages remained unchanged after 3 months.

The relationship between family environment and progressive nutritional status showed that only 50% of the children coming from poor family environments had normal nutritional development, whereas the percentages for children from good, fair, and deficient environments were 80, 75, and 71.4%, respectively.

This study examined children up to the age of 2; however, it is also necessary to study children over age 2. Overall findings indicate that most families can provide an environment that is suitable for the psychological and nutritional development of their children. The families classified in the deficient and poor groups have many of the negative characteristics often associated with poor populations. The percentages found for these groups (32.34%) are very similar to those found in other studies (Cortazar et al. 1976).

The foregoing results underscore the importance of being able to distinguish between the different types of poor families; this distinction will make it possible to provide preschool services first to those groups who need them most. These results also indicate that it is advisable for existing programs to revise their priorities by doing an in-depth study of the populations they work with.

Specific Measures — Financial Implications of Preschool Systems and of Complementary Measures at the Primary Level

Preschools

Our knowledge of formal and nonformal preschool programs enables us to begin to estimate the impact of mass programs on marginal sectors.

In this section, an estimate will be made of the annual cost of operating a combination of preschool programs that would provide effective services for poor groups in Chile. A combination of systems is used because, as was seen earlier, there is no single state of poverty. Thus, insofar as it is possible, the best system for each group or population should be used.

Progressive nutritional health here refers to the entire series of measures of nutritional status done over time.
The control group was made up of children on the (Magendzo et al. 1980). In the study in question, the type of services provided in nursery schools 12-13 years old. There are 1 206 475 children in the poor category from 0-5 years old, 1 145 963 from 6-11 years old, and 343 433 from 12-13 years old.

On the basis of the study results mentioned previously, about 32.34% of the infant population between 0 and 2 years of age should receive the type of services provided in nursery schools (Magendzo et al. 1980). In the study in question, the control group was made up of children on the waiting list to enter these schools. However, it might be supposed that this percentage could be somewhat higher in the marginal population because many of the people not applying to these schools may be those who are least interested in child education. Therefore, 35% will be used as the estimate. It was also seen that the Early Stimulation Program was directed at children from 0 to 2 years of age from marginal sectors and run by the NHS. The NHS coverage in marginal areas is very good, which would make it possible to encourage the development of children who do not attend nursery school.

Although the follow-up study done on children who attended the Early Stimulation Pilot Program shows that by the age of 6, these children seem to have lost the progress they acquired while participating in the program, it can still be assumed that: (a) the large-scale program currently under way should correct the problems that have been detected and (b) children with the most serious problems would be incorporated into the preschool system that is best for them after they reach 2 years of age.

Because the Early Stimulation Program intends to cover 70% of the population and the nursery schools would cover 35% of this population, some overlapping might occur. However, this problem could be held at a minimum if the directors of the Early Stimulation Program exercised some supervision in this area. What is more, because the children attending the nursery schools come from deficient or poor family environments, it could prove beneficial for some of them to inadvertently attend both programs.

For children in the 2-6 age group, a combination of programs is proposed that involves working with all parents in a parents–children type of program and working with children from deficient and poor family environments in a system similar to the Plaza Program. This combination would help increase parents' understanding of their children and would enhance their personal growth and commitment to them. The direct work done by monitors from the community with the children would prepare the children more fully for entering primary school.

The cost for a child enrolled in the Plaza Program is US$272.25. The community covers 17% of these costs, and a large-scale program could also cut costs by some 15%; resulting in a real cost of US$192.07.

Ideally, both parents should participate in this program; however, the likelihood of this occurring is only 50%; in the other 50% of cases, only one parent would probably participate. Optimal participation can be expected because the program will operate on a broad scale. Furthermore, a ratio of 1:1 can be used in the calculations because a parent might have more than one preschool-age child. Because the community and the Church assume 20% of costs, cost estimates would then be US$40.19 per participant.

The operating costs for 1 year of this proposed combined program would be as follows. Children from 0 to 2 years old: Thirty-five percent of the poorest children from this group would cost US$350; the overall cost would be US$49 273 700. The National Board of Nursery Schools and the preprimary courses given by the Ministry of Education would be transformed and used exclusively as nursery schools.

Table 1 shows the distribution of the Chilean population by age group divided into "poor" and "not poor" categories. There are 1 206 475 children in the poor category from 0-5 years old, 1 145 963 from 6-11 years old, and 343 433 from 12-13 years old.

Table 1. Population in Chile by socioeconomic class.

<table>
<thead>
<tr>
<th>Group age (years)</th>
<th>Urban</th>
<th>Rural</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5</td>
<td>238642</td>
<td>113233</td>
<td>351875</td>
</tr>
<tr>
<td>6-11</td>
<td>335414</td>
<td>159151</td>
<td>494565</td>
</tr>
<tr>
<td>12-13</td>
<td>111805</td>
<td>53050</td>
<td>164855</td>
</tr>
<tr>
<td>14-19</td>
<td>252975</td>
<td>120035</td>
<td>373010</td>
</tr>
<tr>
<td>≥20</td>
<td>1026848</td>
<td>487230</td>
<td>1514078</td>
</tr>
<tr>
<td>Total</td>
<td>1965683</td>
<td>932700</td>
<td>2898383</td>
</tr>
</tbody>
</table>

Source: Schiefelbein et al. (1978).

Table I. Population in Chile by socioeconomic class.

<table>
<thead>
<tr>
<th>Group age (years)</th>
<th>Not poor</th>
<th>Poor</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>Rural</td>
<td>TOTAL</td>
<td>Urban</td>
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Even though nursery schools are more expensive, US$350 is used because a widespread program would cut costs proportionally.
At present the Nursery School Board programs cover 40 569 children and the Ministry programs cover 91 501 children; thus, the Nursery School Board was spending US$14 199 150 and the Ministry of Education was spending a total of US$11 630 692 on preschool services. Additional costs will add up to US$23 443 558.

Children from 2 to 5 years and 11 months of age: There are 804 470 poor children in this age group. The 1:1 ratio established earlier would make the cost of preschool services provided to parents of preschoolers US$32 331 649. Both the preschoolers themselves and their brothers and sisters would benefit from these services.

It will only be necessary to incorporate 35% of the 804 470 children, that is the children coming from the worst family environments or having no one to care for them, into Plaza type programs. The cost for these services will amount to US$54 080 094.

The additional cost of these preschool measures would be US$109 855 601.

Complementary measures at the primary level: The selectivity of the Chilean education system has been shown repeatedly (Schiefelbein and Clavel 1976). The proposed investments in preschool education are really compensatory measures designed to give marginal sectors greater educational opportunities and in no way imply that primary education should be neglected.

The investments made in preschool education are important in themselves and in terms of the effects they have on primary education. Preschools not only help children stay in school longer but lead to progressively better performance while they are there (Jencks 1972). This in turn will help increase the child's future productivity (Selowsky 1976). Estimates indicate that Chileans must have at least 8 years of schooling to be able to earn a salary that will enable them to cover the basic needs (Trucco and Granados 1978).

There are several points that have been shown to be important in the development of students in the educational system and that continue to be fundamental despite any investments made in preprimary education (Schiefelbein 1975). The following deserve to be mentioned:

(a) Incomplete schools are common (Schiefelbein et al. 1978). There are 475 schools that offer up to fourth grade, 474 offer up to fifth grade, 2815 offer up to sixth grade, 385 up to seventh grade, and 2296 up to eighth grade (PREALC 1977). The cost of gradually providing the missing grades in these schools (500 per year) is US$1 000 000 annually (this includes the cost of hiring teachers and building classrooms).

(b) Distribution of textbooks. The positive effect of the availability of textbooks on achievement has often been mentioned in studies on this topic (Farrell and Sepulveda 1978; Schiefelbein and Farrell 1973). The annual cost of giving out Spanish and mathematics textbooks, and one notebook per student, is US$4 000 000 (average life of a textbook is 3 years).

(c) Food for students. Based on information provided by the Ministry of the Interior of Chile (Ministry of the Interior 1976), in 1976 the number of students in primary schools was distributed in the following way: 50.8% came from extremely poor families, families in which one parent works on the PEM (Minimal Employment Program) and low-income families, and 49.2% came from families having the basic resources and without problems. These figures indicate how important food programs for students can be in terms of keeping them in primary school.

In 1972, 67.9% of the students enrolled in primary school received breakfast and 31.6% received lunches and dinners. These figures declined to 47.2% and 13.8%, respectively, in 1978 (Latorre 1980b). The total cost of providing 50.8% of primary students with breakfast and at least 20% with lunches and dinners would be: breakfast (1 135 817 x US$38.18) US$43 365 493 and lunches/suppers (447 172 x US$91.97) US$41 126 427. The additional cost would be US$1 000 000 (81 217 x US$38.18) for breakfasts, and US$12 836 437 (139 572 x US$91.97) for lunches/suppers.

(d) There are several other questions that would involve the redistribution of current resources rather than additional costs.

Teachers working with children from marginal areas must receive psychological in-service training (undertaken by PEIP) to enable them to be effective in their work. Past experience has shown that repeating the first year of primary school is not directly related to children's intellectual abilities. Other factors such as personal characteristics (apathy vs. active participation, obedience vs. rebelliousness, etc). determine

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7 Enrollment 1979.
8 Enrollment 1980.
9 The costs of the Early Education Program are not included here since the Ministry of Health pays for them and this outlay is currently being made.
10 There is still a real repetition rate in the First Grade of over 40%.
11 Annual cost based on a 176-day year.
“who” repeats (the qualitative dimension). Furthermore, the fact that there have always been students in every grade who repeat can affect the “number” of children not passed (quantitative dimension).

Certain changes could be made in the curriculum as a means of promoting the development of all children (Castillo 1975; Castillo 1978). It would be highly advisable to adapt the school calendar to the region, especially in those countries that have different climates from region to region. Economic factors such as harvest time should be taken into consideration so that school attendance remains constant.

The costs mentioned here are in no way conclusive and final, but rather are general estimates of the sums of money involved. The total cost of the measures proposed here comes to US$130 792 903. The public expenditure in education is US$527 800 000 (Latorre 1978), so the additional resources proposed would require a 24.8% increase in the education budget.

Discussion

This study has reviewed findings on poverty, childhood, and preschool education in Chile. It has stressed the work done by the PILIE with regard to the National Board of Nursery Schools and nonformal preschool programs. The information gathered enabled us to estimate what the additional costs to the education budget would be for instituting a combined system of preschool services for marginal children and for implementing measures aimed at keeping children in primary school. A thorough examination of each type of preschool program, its effectiveness, and costs has made it possible to propose a combination of these programs.

The additional resources needed for these programs in Chile represent 24.8% of the education public expenditure and 3% of total public spending. Can budget cuts be made in other areas to increase the education budget by 24.8%?

The sum of money involved lends itself to the following considerations:

(a) It is important to remember that all the studies on preschool education point out that it is a profitable undertaking (BID / ODEPLAN 1977; Selowsky 1976). The short-term investment in this education is considerable but should be viewed in terms of the social justice it will bring about. Over the long term, the system will become self-sufficient because these investments will create parents who can cover their children’s basic needs. In the medium term, these investments will replace current programs that provide compensation to the heads of low-income households.

(b) It is vitally important to determine the effectiveness and costs of nonformal preschool programs in Latin America in general. This information will help in devising effective preschool program plans for marginal sectors. This is the only way to turn government declarations of intention into action. We need numbers to determine the feasibility of the plans.

(c) Efforts must be intensified to find effective systems that are suited to the needs of the different groups that make up the marginal sectors in Latin America and whose costs make it possible to implement them on a large scale.

(d) Education alone cannot bring about complete social change; although there has been greater cultural mobility than income mobility, education has stayed within the limits of the existing social structure and has been highly selective.

(e) There must be a tremendous political will behind a change of this sort because there is no denying the present situation has made it possible for certain sectors to accumulate wealth more rapidly. Measures such as the ones proposed here would, at the very least, endanger the pace of that accumulation. What is needed is a government that is committed to advancing the interests of the disadvantaged, a government that has enough power to translate its commitments into action.

(f) Unfortunately, the tremendous development of the modern sector in our economies, accompanied by labour-saving technologies and the invasion of transnational corporations, with all the well-known consequences they bring (high unemployment, increased number of poor people) cast doubt on the feasibility of undertaking some concrete action to overcome poverty.

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